LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (previously presented) A method for depositing a polymeric material onto a substrate, the method comprising introducing a monomeric material in a gaseous state into a plasma deposition chamber in which a plasma zone has a volume of at least $0.5m^3$, igniting a glow discharge within said chamber, and applying a voltage as a pulsed field, at a power of from 0.001 to $500w/m^3$ for a sufficient period of time to allow a polymeric layer to form on the surface of the substrate.

2. (previously presented) The method of Claim 1 wherein the plasma zone within the chamber has a volume of about $1m^3$ or more.

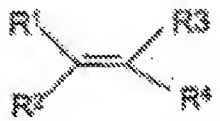
3. (previously presented) The method of Claim 2 wherein the plasma zone has a volume of between lm^3 and $10m^3$.

4. (previously presented) The method of Claim 1 wherein the power is applied at from 0.001 to $100w/m^3$.

5. (previously presented) The method of Claim 4 wherein the power is applied at from 0.04 to $100w/m^3$.

6. (previously presented) The method of Claim 1 wherein the monomeric material is an unsaturated organic compound comprising a chain of carbon atoms, which are optionally substituted by halogen.

7. (previously presented) The method of Claim 6 wherein the monomeric material is a compound of formula (I):



(I)

where R^1, R^2 and R^3 are independently selected from hydrogen, alkyl, haloalkyl or aryl optionally substituted by halo; provided that at least one of R^1, R^2 or R^3 is hydrogen, and R^4 is a group X-R^5 where R^5 is an alkyl or haloalkyl group and X is a bond; a group of formula -$C(O)O(CH_2)_nY$- where n is an integer of from 1 to 10 and Y is a bond or a sulphonamide group; or a group -$(O)_pR^6(O)_q(CH_2)_t$- where R^6 is aryl optionally substituted by halo, p is 0 or 1, q is 0 or 1 and t is 0 or an integer of from 1 to 10, provided that where q is 1, t is other than 0.

8. (previously presented) The method of Claim 7 wherein the compound of formula (I) is an acrylate of formula (III)

$$CH_2=CR^7C(O)O(CH_2)_nR^5 \qquad (III)$$

where n and R^5 as defined above in claim 7 and R^7 is hydrogen or C_{1-6} alkyl.

9. (previously presented) The method of Claim 8 wherein the acrylate of formula (III) is 1H,1H,2H,3H-heptadecafluorodecylacylate.

10. (previously presented) The method of Claim 1 wherein the monomeric compound in a gaseous state is supplied to the chamber in combination with a carrier gas.

11. (previously presented) The method of Claim 10 wherein the carrier gas is helium.

12. (previously presented) The method of Claim 1 wherein gaseous material is supplied to the chamber at a rate of at least 1 standard cubic centimetre per minute (sccm).

13. (previously presented) The method of Claim 1 wherein vapours of compounds of formula (I) in the chamber are maintained at pressures of from 0.01 to 300 mbar.

14. (previously presented) The method of Claim 1 wherein the power is pulsed in a sequence in which the power is on for 20μs and off for from 1000μs to 20000μs.

15. (previously presented) The method of Claim 1 wherein gas is supplied to the chamber along a temperature gradient.

16. (previously presented) The method of Claim 1 wherein the chamber is heated during the deposition process.

17. (withdrawn) An apparatus for depositing a polymeric material onto a substrate, the apparatus comprises a plasma deposition chamber, at least two electrodes arranged so as to ignite a plasma within the chamber, a pump system arranged to feed monomer gas into the chamber, and power control means programmed to pulse power supplied to the electrodes so as to produce a plasma at a power of from 0.001 to 500w/m^3 within a plasma zone within the chamber, the plasma zone having a volume of at least 0.5m^3.

18. (withdrawn) The apparatus of Claim 17 wherein the apparatus further comprises heating means for the chamber.

19. (withdrawn) The apparatus of Claim 17, which further comprises a container for monomer, which is connected to the chamber.

20. (withdrawn) The apparatus of Claim 19 wherein heating means is arranged to create an increasing temperature gradient between the container and the chamber.